

What is claimed is:

1. A socket for forming electrical connections between a first surface having a first contact array and a second surface having a second contact array, the socket comprising:
 - a plate having a thickness, the plate including surfaces defining a plurality of passages extending through the thickness of the plate; and
 - a plurality of compliant contacts, each contact inserted into one of the passages, each contact including a first contact surface for electrically engaging the first contact array and a second contact surface for electrically engaging the second contact array, wherein at least one of the contacts is a low current contact, and at least one of the contacts is a high current contact capable of passing more current than the low current contact.
2. The socket according to claim 1, wherein the high current contact is larger than the low current contact.
3. The socket according to claim 2, wherein the high current contact is at least twice as big as the low current contact.
4. The socket according to claim 1, wherein the plurality of contacts form an array having an outer periphery, the high current contact positioned on the outer periphery.
5. The socket according to claim 4, wherein the high current contact at least partially shields one or more contacts positioned within the array from electromagnetic interference.
6. The socket according to claim 5, wherein the array is a rectangular array having four sides, and wherein one or more high current contacts are positioned on each side of the rectangular array.
7. The socket according to claim 1, wherein the high current contact acts as a spacer when a compressive load is applied to the socket.

8. The socket according to claim 1, wherein the high current contact varies in shape from the at least one low current contact so as to provide alignment information.

5 9. The socket according to claim 1, wherein the plate is made from a single piece of insulating material.

10. The socket according to claim 1, further comprising a frame attached to the plate.

10 11. The socket according to claim 1, wherein at least one of the first contact array and second contact array is one of a land grid array and a ball grid array.

12. A socket assembly comprising:

a first surface including a first contact array;

a second surface including a second contact array; and

15 a socket of claim 1, wherein the first contact surface of each contact is electrically coupled to the first contact array, and the second contact surface of each contact is electrically coupled to the second contact array.

20 13. The socket assembly according to claim 12, wherein the first surface is of an integrated circuit and the second surface is of a circuit board.

25 14. The socket assembly according to claim 12, wherein one of the first surface and the second surface is a circuit board, and wherein at least one of a capacitor and a resistor is positioned between the array socket and the circuit board.

15. A method of passing signals between a first surface having a first contact array and a second surface having a second contact array, the method comprising:

30 providing a socket having a plurality of compliant contacts, wherein at least one of the contacts is a low current contact and at least one of the contacts is a high current contact;

compressing the socket between the first surface and the second surface, such that a first contact surface of each contact is electrically coupled to the first contact array, and a second contact surface of each contact is electrically coupled to the second contact array,

passing a current through the high current contact, the current greater than a maximum current that can be passed through the low current contact.

5 16. The method according to claim 15, wherein one of the first surface and the second surface is a circuit board, the method further including positioning at least one of a capacitor and a resistor between the socket and the circuit board.

10 17. The method according to claim 15, further comprising connecting the high current contact to one of a ground signal or a power signal.

18. The method according to claim 15, wherein the high current contact acts as a spacer.

15 19. The method according to claim 15, further comprising using the high current contact to shield at least one of the plurality of contacts from electromagnetic interference.

20 20. The method according to claim 15 wherein at least one of the first contact array and second contact array is one of a land grid array and a ball grid array.

21. A socket for forming electrical connections between a first surface having a first contact array and a second surface having a second contact array, the socket comprising:

25 a plate having a thickness, the plate including surfaces defining a plurality of passages extending through the thickness of the plate; and

a plurality of compliant contacts, each contact inserted into one of the passages, each contact including a first contact surface for electrically engaging the first contact array and a second contact surface for electrically engaging the second contact array, wherein at least one of the contacts is a small contact and at least one of the contacts is a large contact, the large contact at least twice as big in size as the small contact.

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22. The socket according to claim 21, wherein the large contact is capable of passing more current than the small contact.

23. The socket according to claim 21, wherein the plurality of contacts form an array having an outer periphery, the large contact positioned on the outer periphery.

5 24. The socket according to claim 23, wherein the large current contact at least partially shields one or more contacts positioned within the array from electromagnetic interference.

10 25. The socket according to claim 21 wherein the large contact acts as a spacer.

26. The socket according to claim 21, wherein at least one of the first contact array and second contact array is one of a land grid array and a ball grid array.

15 27. A socket assembly comprising:
 a first surface including a first contact array;
 a second surface including a second contact array; and
 a socket of claim 21, wherein the first contact surface of each contact is electrically coupled to the first contact array, and the second contact surface of each contact is electrically coupled to the second contact array.

20 28. The socket according to claim 27, wherein one of the first surface and the second surface is a circuit board, and wherein at least one electronic component is positioned between the socket and the circuit board.

25 29. The socket according to claim 28, wherein the at least one electronic component is selected from the group of electronic components consisting of a capacitor and a resistor.

30 30. A method of passing signals between a first surface having a first contact array and a second surface having a second contact array, the method comprising:
 providing a socket having a plurality of compliant contacts, wherein at least one of the contacts is a small contact and at least one of the contacts is a large contact, the large contact twice as big in size as the small contact;
 compressing the socket between the first surface and the second surface,

such that a first contact surface of each contact is electrically coupled to the first contact array, and a second contact surface of each contact is electrically coupled to the second contact array.

5 31. The method of claim 30, further comprising passing a current through the large contact, the current greater than a maximum current that can be passed through the small contact.

32. The method according to claim 30, wherein the large contact acts as a spacer.

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33. The method according to claim 30, further comprising using the large contact to shield at least one of the plurality of contacts from electromagnetic interference.

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34. The method according to claim 30, wherein one of the first surface and the second surface is a circuit board, the method further including positioning at least one electronic component between the socket and the circuit board.

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35. A plate for a socket, the socket including a plurality of double sided contacts for forming electrical connections between a first surface having a first contact array and a second surface having a second contact array, the plate having a thickness, the plate comprising:

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surfaces defining an array of passages, each passage extending through the thickness of the plate such that one of the contacts can be inserted into each passage, wherein at least one of the passages is a small passage having a first size, and at least one of the passages is a large passage having a second size larger than the first size, the large passage capable of having a larger contact inserted compared to the small passage.

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36. The plate according to claim 35, wherein the large passage forms a rectangle extending the length of at least two or more small passages.

37. The plate according to claim 35, wherein the array has an outer periphery, the large passage positioned on the outer periphery.